California Regional Water Quality Control Board
North Coast Region

CLEANUP AND ABATEMENT ORDER NO. R1-2000-83

FOR

GLEN CROWNOVER, SR. AND JOYCE CROWNOVER
MALM FIREPLACES, INC.
FIREFORM PORCELAIN
WARREN L. AND PHYLLIS M. WELSH AND
ALLAN & KIMBERLY HENDERSON
326 and 368 Yolanda Avenue, Santa Rosa

Sonoma County

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds that:

1. Glen Crownover, Sr., and Joyce Crownover (hereinafter the Crownovers) owned property at 326 and 368 Yolanda Avenue, Township 7 North, Range 8 West, Section 35, South West ¼ of North East ¼ , Santa Rosa, California Quadrangle, USGS, 38.41194914° Latitude, -122.71137004° Longitude, from 1961 to 1981. Malm Fireplaces, Inc., operated a metal fireplace fabrication factory since 1961 until 1981 at 326 and 368 Yolanda Avenue. This metal fireplace fabrication factory first operated in the area (APN 044-091-009) shown as "A" on Figure 1 through 1961-1992 and subsequently operated at the location (APN 044-081-024) shown as "B" on Figure 1. The factory continues to operate at location "B." The properties known as APN 044-072-009 and APN 044-081-024 are hereinafter referred to as the site.

2. The Crownovers sold the site to Warren L. Welsh and Phyllis M. Welsh in 1981, and the Crownovers continued to operate the fireplace fabrication factory after the sale and still operate the factory at this time at location "B" on the site.

3. The site is bordered on the east, south and west by single and multi-family residential housing and commercial businesses and on the north by residential housing and Yolanda Avenue. The current businesses housed in various buildings on the site include a metal fireplace manufacturer, a porcelain sign manufacturer, automotive upholstery business, automotive painting business, automotive sales, and a television repair shop. Fireform Porcelain, Inc., now occupies one of the buildings which was previously used by Malm Fireplaces, Inc., shown as location "A" on the attached map.

4. In August 2000 Allan and Kimberly Henderson purchased the site from the Welshes.

5. The City of Santa Rosa Department of Industrial Waste inspection records document the use and discharge of TCE by Malm Fireplaces, Inc. Laboratory

analytical results from sampling on November 7, 1990, show TCE in the discharge effluent to the sanitary sewer as high as 280 ppb.

6. Fireform Porcelain, Inc., has been in operation at their current location (shown as "A" on Figure 1) since approximately 1992. The City of Santa Rosa Industrial Waste Department reports finding 76 ppb in effluent sampled on August 10, 1994. Records show use of several products containing TCE by Fireform Porcelain, Inc.

7. Glen Sr. and Joyce Crownover, Malm Fireplaces, Inc., Fireform Porcelain, Inc., Warren L. and Phyllis M. Welsh, and Allan and Kimberly Henderson are hereinafter referred to as the dischargers.

8. On March 9, 1999 Regional Water Board staff sampled the well at 372 Yolanda Avenue, and TCE was found in the well at 179 µg/l or parts per billion (ppb). TCE has subsequently been detected in other domestic wells at levels as high as 1,080 ppb. The Maximum Contaminant Level for TCE established by the State Department of Health Services for protection of public health is 5 ppb, and the public health goal established by the Office of Environmental Health Hazard Assessment is 0.8 ppb.

9. TCE is commonly used as a solvent for degreasing metals. TCE is a human carcinogen and is listed by the state pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986 as a chemical known to the State to cause cancer.

10. The Regional Water Board staff began an investigation of the source of contamination of the well at 372 Yolanda Avenue. The Regional Water Board staff assessed the available hydrogeologic information, data from nearby investigations, and existing and historical land uses in the vicinity of 372 Yolanda Avenue. In 1999, the Regional Water Board staff began sampling domestic wells along Yolanda Avenue. The well with the consistently highest levels of contaminants was found to be in the building at 368 Yolanda Avenue, presently occupied by Fireform Porcelain, Inc., and formerly occupied by Malm Fireplaces, Inc. TCE was detected in groundwater in this domestic well at levels up to 1080 ppb. The contaminants emanating from the area have affected and threaten to continue to affect the beneficial uses of waters of the State.

11. In 1999, the Regional Water Board applied to the State Water Resources Control Board for funds from the Cleanup and Abatement Account to aid in investigating, cleaning-up and abating the discharges of TCE at or near the site. On October 21, 1999, the State Water Resources Control Board adopted Resolution Number 99-093 providing funding in the amount of $256,250.00 aimed at abating the public health threat and identifying the responsible party(ies) for the TCE discharge.

12. In 2000, Regional Water Board staff conducted a passive soil gas survey to facilitate determining the extent of contamination, and to aid in identifying the source of the contamination. The results of the survey indicated the highest TCE soil gas levels centered to the east of the building presently occupied by Malm Fireplace, Inc., at 326 Yolanda Avenue.

13. Groundwater beneath the site is contaminated with volatile organic compounds based on well sampling. Soil gas sampling has also detected volatile organic compounds in soil gasses on the site and migrating from the site. Hydrologic evidence indicates a general groundwater gradient flowing to the south towards Colgan Creek.

14. The dischargers have caused or permitted, cause or permit, or threaten to cause or permit waste to be discharged or deposited where it is, or probably will be, discharged into the water of the state and creates, or threatens to create, a condition of pollution or nuisance in violation of the Porter-Cologne Water Quality Control Act and provisions of the *Water Quality Control Plan for the North Coast Region* (Basin Plan).

15. Beneficial uses of areal groundwater include domestic, irrigation, and industrial supply. Beneficial uses of Colgan Creek, a tributary to Mark West Creek, the Laguna de Santa Rosa and the Russian River are:

    a. Municipal and domestic supply
    b. Agricultural supply
    c. Industrial process supply
    d. Groundwater recharge
    e. Navigation
    f. Hydropower generation
    g. Water contact recreation
    h. Non-contact water recreation
    i. Commercial and sport fishing
    j. Warm freshwater habitat
    k. Cold freshwater habitat
    l. Wildlife habitat
    m. Migration of aquatic organisms
    n. Spawning, reproduction, and/or early development of fish

16. The depth to groundwater at the site ranges seasonally from approximately 2-25 feet below ground surface. The soils underlying the site generally consist of interbedded sands, gravels, silts and clays known as the Glen Ellen formation. These deposits allow abundant use of groundwater as domestic supply.

17. Discharge prohibitions contained in the Basin Plan apply to this site. State Water Resources Control Board Resolution No. 68-16 applies to this site. State Water Resources Control Board Resolution 92-49 applies to this site and sets out the "Policies and Procedures for Investigation and Cleanup and Abatement for Discharges under Section 13304 of the California Water Code."

18. Water quality objectives exist to ensure protection of the beneficial uses of water. Where multiple beneficial uses of water exist, the most stringent water quality objectives for protection of all beneficial uses are selected as the protective water quality criteria. Alternative cleanup and abatement actions that evaluate the feasibility of, at a minimum: (1) cleanup to background levels, (2) cleanup to levels

attainable through application of best practicable technology, and (3) cleanup to protect water quality objectives, need to be considered. Narrative water quality objectives are interpreted through application of available scientific information and numerical limits are thence derived from such information. The following table sets out the water quality objectives, derived from the narrative water quality objectives in the basin plan, for surface and groundwaters at the site:

Constituent of Concern	Background Level µg/l	Water Quality Objective µg/l	Reference for Objective
1,1,1-Trichloroethane	<0.5	200	for protection of domestic supply, Title 22 § 64444.5
1,1-Dichloroethane	<0.5	5	for protection of domestic supply, Title 22 § 64444.5
1,1-Dichloroethene	<0.5	6	for protection of domestic supply, Title 22 § 64444.5
1,2-Dichloroethane	<0.5	0.4	The Maximum Contaminant Level for protection of domestic supply, Title 22 § 64444.5, is 0.5 µg/l. However, for protection of domestic water supply, all household uses must be considered including drinking water, showering and bathing, food preparation and similar uses. The Office of Environmental Health Hazard Assessment (OEHHA) issues Public Health Goals for water for protection of public health in the domestic use of water, and the PHG for 1,2-Dichloroethane is 0.4 µg/l.
1,4-dichlorobenzene	<0.5	5	for protection of domestic supply, Title 22 § 64444.5
Benzene	<0.5	1.0	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1.0 µg/l for domestic supply; USEPA health advisory for cancer risk is 0.7 µg/l; applied to the narrative TOXICITY objective in the Basin Plan
Bromodichloromethane	<0.5	100	for protection of domestic supply, Title 22 § 64444.5
Bromoform	<0.5	100	for protection of domestic supply, Title 22 § 64444.5
Carbon tetrachloride	<0.5	0.1	The Maximum Contaminant Level for protection of

			domestic supply, Title 22 § 64444.5, is 0.5 µg/l. However, for protection of domestic water supply, all household uses must be considered including drinking water, showering and bathing, food preparation and similar uses. The Office of Environmental Health Hazard Assessment (OEHHA) issues Public Health Goals for water for protection of public health in the domestic use of water, and the PHG for Carbon tetrachloride is 0.1 µg/l.
Chloroform	<0.5	100	for protection of domestic supply, Title 22 § 64444.5
Chloromethane	<0.5	3	Drinking Water Health Advisory, USEPA
cis-1,2-Dichloroethene	<0.5	6	for protection of domestic supply, Title 22 § 64444.5
Dibromochloromethane	<0.5	100	for protection of domestic supply, Title 22 § 64444.5
Ethylbenzene	<0.5	29	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 700 µg/l for domestic supply; USEPA taste and odor threshold of 42µg/l, Federal Register 54(97):22064-22138: applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan
Gasoline	<0.5	5	USEPA taste and odor threshold of 5µg/l, Federal Register 54(97):22064-22138: applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan
Methyl Tertiary Butyl Ether (MtBE)	<0.5	5	California Secondary MCL for protection of Taste and Odor, Title 22 § 64444.5
Tetrachloroethene (PCE)	<0.5	0.56	The Maximum Contaminant Level for protection of domestic supply, Title 22 § 64444.5, is 5.0 µg/l. However, for protection of domestic

			water supply, all household uses must be considered including drinking water, showering and bathing, food preparation and similar uses. The Office of Environmental Health Hazard Assessment (OEHHA) issues Public Health Goals for water for protection of public health in the domestic use of water, and the PHG for tetrachloroethylene is 0.56 µg/l.
Toluene	<0.5	42	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 150 µg/l for domestic supply; USEPA taste and odor threshold of 42µg/l, Federal Register 54(97):22064-22138: applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan
trans-1,2-Dichloroethene	<0.5	10	for protection of domestic supply, Title 22 § 64444.5
Trichloroethene (TCE)	<0.5	0.8	The Maximum Contaminant Level for protection of domestic supply, Title 22 § 64444.5, is 5.0 µg/l. However, for protection of domestic water supply, all household uses must be considered including drinking water, showering and bathing, food preparation and similar uses. The Office of Environmental Health Hazard Assessment (OEHHA) issues Public Health Goals for water for protection of public health in the domestic use of water, and the PHG for trichloroethene is 0.8 µg/l.
Xylene	<0.5	17	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1750 µg/l for domestic supply; USEPA taste and odor

			threshold of 17µg/l, Federal Register 54(97):22064-22138: applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan

19. Reasonable costs incurred by Regional Water Board Staff in overseeing cleanup or abatement activities are reimbursable under section 13304 of the California Water Code.

20. The Regional Water Board will ensure adequate public participation at key steps in the remedial action process, and shall ensure that concurrence with a remedy for cleanup and abatement of the discharges at the site shall comply with the California Environmental Quality Act.

21. The issuance of this cleanup and abatement order is an enforcement action being taken for the protection of the environment and, therefore, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15308 and 15321, Chapter 3, Title 14 of the California Code of Regulations.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to California Water Code Sections 13267(b) and 13304, the dischargers shall cleanup and abate the discharge and threatened discharge of volatile organic compounds and any other wastes forthwith and shall comply with the following provisions of this Order:

1. Conduct all required work under the direction of a California registered civil engineer or geologist experienced in volatile organic compound soil and groundwater remediation.

2. Submit, for the Executive Officer's concurrence, a new workplan or revise the October 27, 2000 workplan submitted by EnviroNet Consulting to address Regional Water Board comments within 15 days of receipt of the comments. The workplan shall characterize the release, determine groundwater flow directions for at least two aquifers, and begin to define the horizontal and vertical extent of onsite and offsite soil and groundwater contamination. The workplan shall also include a schedule and commitment by the dischargers for implementation of the workplan, submittal of report of investigation, and additional workplans for complete remedial investigation.

3. Commence implementation of the workplan submitted under No. 2, above, within 10 days following concurrence by the Executive Officer.

4. Submit, for the Executive Officer's concurrence, a report of implementation of the workplan in accordance with the schedule submitted under provision 2, but no later than January 15, 2001.

5. Submit, for the Executive Officer's concurrence, a scope of work and revised schedule for additional deliverables, including, but not limited to, a health and

ecological risk assessment that assesses offsite as well as onsite exposure potential, a treatability study, a feasibility study, and a draft Remedial Action Plan for the final cleanup and abatement of discharges at and from the site. The schedule shall include submittal of a final remedial investigation report by June 1, 2001, and a schedule for completion of the remaining deliverables.

6. Provide monthly progress reports describing all actions taken to comply with this Order. Reports shall contain sufficient detail to determine progress and interactions/coordination between the public, agencies, and other interested parties.

7. Comprehensively assess all interim and final remedial actions annually for effectiveness. An annual report containing the findings from the assessment shall be submitted by November 1 of each year.

8. Provide copies of all correspondence and documents relating to this investigation to the Regional Water Board.

9. Promptly pay, in accordance with the invoicing instructions, all invoices for Regional Water Board oversight, including oversight costs for the Office of Environmental Health Hazard Assessment review of necessary documents including the ecological and human health risk assessment.

10. If, for any reason, the dischargers are unable to perform any activity or submit any documentation in compliance with the work schedule contained in this order or submitted pursuant to this order and approved by the Executive Officer, the dischargers may request in writing, an extension of time as specified. The extension request must be submitted five days in advance of the due date and shall include justification for this delay including the good faith effort performed to achieve compliance with the due date. The extension request shall also include a proposed time schedule with new performance dates for the due date in question and all subsequent dates dependent on the extension. A written extension may be granted for good cause, in which case the order will be revise accordingly.

Ordered by: _____

Lee A. Michlin
Executive Officer

November 14, 2000